Group Claims

I. Claims 136-163 and 171-173, drawn to a molecule which comprises a transcription initiation structure classified in class 536, subclass 24.3.

II. Claims 164-170, drawn to an array of molecules which comprises a transcription initiation structure classified in class 435, subclass 6.

The criteria for a proper requirement for restriction are that (1) the inventions must be independent or distinct as claimed; *and* (2) there must be a serious burden on the Examiner if restriction is not required. MPEP § 803. *See also* 37 C.F.R. § 1.141(a) and MPEP § 806.04(b).

The Examiner alleges that inventions of Groups I and II are unrelated. The Examiner alleges that the claimed inventions are structurally different in that the molecules of Group I are not required to be immobilized to a solid support (or a particle) while all of the products of Group II are required to be immobilized to a solid support, wherein, in a certain embodiment, immobilized in high density capacity. The Examiner contends that the uses and steps governing the products, as well as their uses, would differ. The Examiner further contends that because the inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction is proper.

Applicant respectfully submits that the claims are directed to abortive promoter cassettes (APCs). The APCs effect abortive reiterative synthesis of oligonucleotides for the detection of a target. The Examiner is basing the restriction solely on the additional limitations recited in the claims of Group II, which depend from and incorporate all the

limitations of claim 136 of Group I. The claims of Group II further require coupling of the claimed APC molecules of claim 136 to a solid phase. Applicant respectfully submits that the claimed APCs effect abortive reiterative oligonucleotide synthesis for the detection of a target whether in soluble form or coupled to a solid phase. While the Examiner alleges that the inventions are structurally different, Applicant respectfully submits that the claimed APC molecules are *structurally similar* and are used for the same purpose, *viz.*, for effecting abortive reiterative oligonucleotide synthesis to detect a target. Thus, coupling of the APCs to a solid phase is merely one embodiment of the Applicant's claimed invention; and the APC bound to a solid phase is encompassed by claim 136 of Group I. Applicant therefore submits that the claims of Group II are not "divergent subject matter" as alleged by the Examiner.

However, even assuming that the claims are unrelated, a requirement for restriction is proper only if a search and examination of all the claims would impose a serious burden on the Examiner. *See* M.P.E.P. § 803. Applicant respectfully submits that a search of the subject matter of the claims of Group I (relating to APCs) would be substantially coextensive with a search of the subject matter of the claims of Group II (relating to APCs attached to a solid phase). While Applicant notes that the Examiner has classified the claimed groups in different classes and subclasses, the common structural feature of the APC in the claims necessarily entails a coextensive search. Moreover, the class and subclass descriptions of Groups I and II cross-reference each other in the USPTO classification descriptions. For instance, the Group I class 536 and subclass 24.3 description cross-references the class and subclass descriptions of Group II as follows:

> *See or Search* 435, Chemistry: Molecular Biology and Microbiology, subclass 6 for analytical processes that utilize probes for detecting the presence, or absence, of a particular nucleotide sequence.

See p. 17 of http://www.uspto.gov/go/classification/uspc536/defs536.pdf (emphasis added); and p. 12 of http://www.uspto.gov/go/classification/uspc435/defs435.pdf. Thus, Applicant respectfully submits that searching and examining the subject matter of the claims of Groups I and II would be coextensive and would not impose a serious burden on the Examiner. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the Restriction Requirement and thereby rejoin Groups I and II.

II. The Election of Species Requirement

A. Self Complementary Structure

The Examiner also requires election of one of three species of the claimed APCs of claim 136.

Applicant notes that the Examiner is requiring an election of members of a Markush-type claim. Applicant respectfully points out that MPEP § 803.02 requires that "[i]f the members of the Markush group are sufficiently few in number or so closely related that a search and examination of the entire claim can be made without serious burden, the examiner must examine all the members of the Markush group in the claim on the merits, even if they may be directed to independent and distinct inventions."

Applicant respectfully submits that the members of the Markush group of the pending claim are sufficiently few in number and are structurally related, in that they are

all APCs which are self-complementary and form a bubble region, that a search of all of the members may be made without a serious burden, contrary to the Examiner's position. Further, even assuming that examination of the entire claim would present a serious burden, MPEP § 803.02 states that "[f]ollowing election, the Markush-type claim will be examined fully with respect to the elected species and further to the extent necessary to determine patentability." If no prior art is found "that anticipates or renders obvious the elected species, the search of the Markush-type claim *will be extended.*" *Id.* (emphasis added). Accordingly, Applicant respectfully requests that the requirement for election of species be withdrawn so the restricted subject matter can be examined together.

B. Target Specific Linker

The Examiner further requires election of one of the species of target specific linkers listed in claims 137-138.

As noted above, where members of the Markush group are sufficiently few in number or so closely related that a search and examination of the entire claim can be made without serious burden, the examiner must examine all the members of the Markush group in the claim on the merits, even if they may be directed to independent and distinct inventions.

The target specific linkers of the claims are linked to the APC. Applicant submits that the members of the Markush group of the pending claims are sufficiently few in number and are related, in that they are attached to the claimed APCs. As noted above, even assuming that examination of the entire claim would present a serious burden, if no